



QUALITY ASSURANCE REPORT/QUALITY CONTROL REPORT

AEE/QA/PR/ 02 /2022-23, DATE: 02.06.2023

Name of Work	:	Modified Estimates for Development of Parks in Paschim County and L M Enclave in Dasarahalli Zone Estimated cost - 60.00 Lakhs
Job Code	:	012-20-000107
Bill No. & Amount	:	1 st & Final Bill, Rs.59,05,978.20 (Including GST)
Name of Agency	:	M/s Star Infra Tech
Type of Test Performed	:	Rebound Hammer Test as per IS13311-(2)-1992.
Materials on which Tests Was Performed	:	1. Kerb Stone 2. Cobble Stone 3. Pre Polished Designer Cement Concrete Tiles 25mm thick 4. Granite slab 100mm thick
Officers present during inspection	:	1.Sri.Thanay Kumar AE- Projects Dasarahalli (Keonics) 2. Sri Jayaraju.K.S. AEE-Quality Assurance
Project Management Consultants	:	Civil Quality Consultants & Engineers
Observations	:	➤ Physical verification was conducted by Project Management Consultants at random locations in presence of AE- Projects Dasarahalli (Keonics) along with, AEE-QA. ➤ The Compressive Strength Test was conducted randomly on Kerb Stone Cobble Stones the readings are tabulated and analysis of the test done is here by furnished ➤ Granite slab 100mm thick, test reports are obtained from Bangalore University for the parameters mentioned in the table-04
Test Locations	:	Location 1 : Paschim County Park

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Table-01: Test Results

Compressive Strength										
SL.NO	Dia of core D (mm)	Height of core H (mm)	Core wt (Kg)	H/D	Correction factor (Based on H/D)	Failure Load (Kn)	Core Strength N/mm ²	Correction Factor for the Dia (Strength if the core x 1.08)	Corrected Cylinder Compressive strength N/mm ²	Equivalent Cube Compressive strength N/mm ²
1	50	80	0.364	1.60	0.957	28.50	14.51	15.68	15.00	18.75
2	50	85	0.386	1.70	0.968	27.60	14.06	15.18	14.69	18.36
3	50	80	0.375	1.60	0.957	29.10	14.82	16.01	15.31	19.14

Table-02: Test Results of Cobble Stones

Compressive Strength							
SL.NO	Grade designation of Paver blocks	Correction factor	Failure load (Kn)	Area mm ²	Compressive strength (N/mm ²)	Apparent Compressive strength (N/mm ²)	Compressive strength (Kg/Sqm)
1	281 Kg/Sqm	1.08	708.1	25000	28.3	30.6	305.9
2		1.08	716.3	25000	28.7	30.9	309.4
3		1.08	721.7	25000	28.9	31.2	311.8
4		1.08	708.9	25000	28.4	30.6	306.2
5		1.08	721.1	25000	28.8	31.2	311.5
6		1.08	709.7	25000	28.4	30.7	306.6

Table-03: Test Results of Pre Polished Designer Cement Concrete Tiles 25mm thick

Wet Transverse Strength Test				
SL.NO	Identification	Wet Transverse strength (N/sq.mm)	Avg Value Wet Transverse strength (N/sq.mm)	Requirement as per IS:1237-1980(Reaffirmed 1990)/IS:13801
1	001	5.3	5.35	The average wet transverse strength should not be less than 3.0 N/sq.mm
2	002	5.8		
3	003	5.3		
4	004	4.9		
5	005	5.2		
6	006	5.6		
Water Absorption Test				
SL.NO	Identification	Water Absorption %	Average Value %	Remarks
1	001	3.9	3.52	Not to exceed 10%
2	002	2.9		
3	003	3.6		
4	004	3.7		
5	005	3.3		
6	006	3.7		

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Table 04: Test Report for Granite stone 100 mm thick

SI NO	Test conducted	Test results	Requirements as per IS:14223, Part-1:1995, Table.1	Reference
1	Water Absorption	0.01%	0.50, max	IS:14223, Part-1:1995
2	Specific Gravity	2.76	2.75, min	IS:14223, Part-1:1995
3	Moisture Content	0.05%	0.15, max	IS:14223, Part-1:1995
4	Tensile Strength	138.25 Kg/cm ²	90.0 Kg/cm ² min	IS:14223, Part-1:1995
5	Moh's Hardness	6.5 on a scale of 10	6-7	IS:14223, Part-1:1995
6	Feature	Stain washable		

Conclusion:

The file containing 1st & Final Bill has been submitted for the above work to QA department on 04.05.2023 requesting for spot inspection. Engineers of QA/QC division have visited the work spot on 19.05.2023.

During the inspection, engineer in charge of work informed the items found in the bill, have been executed by the contractor & documents were made available by PMC team for inspection.

PMC team was instructed to assess the strength for Kerb Stone Cobble Stones by conducting Compressive strength test in presence of engineer in charge of work.

From the test results furnished by PMC consultants, it is concluded that the results of the samples collected are in accordance with the standards/ specifications mention in the IRC codes. However, the results submitted by the PMC have been reproduced here with for further needful action. The results checked by QA/QC relates only for item tested in the particular location randomly.

Further, QA/QC directs the PMC and Engineer in-charge of the work that all materials used for the work shall be inspected, tested and accepted as per the relevant specifications before incorporation in the work. The frequencies and methods of sampling and testing materials, including those required for definite purpose and not covered by MORT&H specifications shall be in accordance to the relevant IRC or BIS or AASHTO/ASTM/BS standards in order of priority.

The concerned Engineer in charge of the work shall follow the direction issued by Chief Commissioner Letter number dated 01.08.2022 and 14.09.2022 and take necessary action as appropriate in accordance with the law.

Note:-

This report by QA/QC is pertaining to the work carried out in 1st & Final bill only. Therefore, further QA/QC reports shall be obtained for the items of work carried out in future Running Account bill / Final bill.

Safety precautions shall be taken at work spot to prevent any mishap, injuries or loss of life to general public and construction workers according to guidelines laid down in code of practices.

Engineer in charge of work shall obtain requisite approval and Implement traffic management plan prior to commencement of work.

Engineer in charge of work shall display details of work, work code, cost of project, start and completion date, and information of Engineer in charge of work with contact numbers at work spot.

Engineer in charge of work and Agency shall ensure that if any damages or defects occur pertaining to the executed work within the Defect Liability period (DLP), The same shall be rectified immediately on top priority without fail.

Engineer in charge of work shall ensure that any changes/ modification/change in location in the sanctioned estimate to be got approved by competent authority.



8.6.2023

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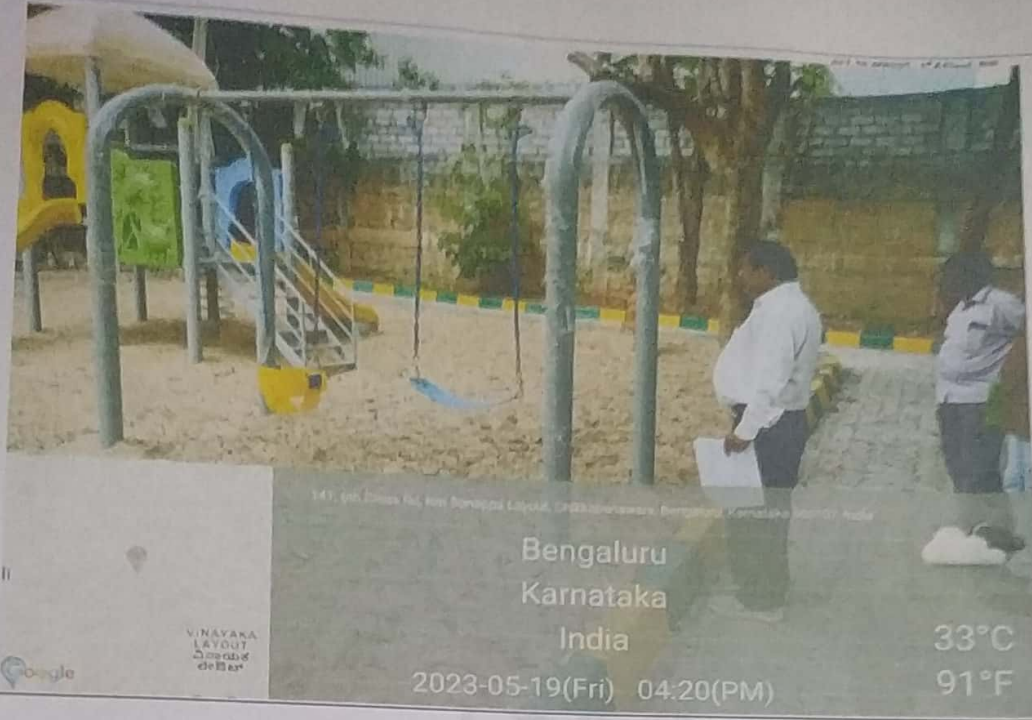
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ಬೆಂಗಳೂರು ಮಹಾನಗರ ಪಾಲಿಕೆ M Enclave in Dasarahalli Zone



[Signature]
06.2023

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